easyLAB
Plug&Teach

Interactive Multimedia & Language Lab

Computer Classroom Upgrade kit

INDEX

1.- INTRODUCTION 5
1.1.- About this manual 5
1.2.- Some basic notions 6
1.3.- What is EasyLAB? 7
1.4.- Minimum requirements 8
1.4.1.- Requirements of the students' computer equipments 8
1.4.2.- Requirements of the teacher's computer equipment 8
1.4.3.- The requirements of the classroom network 9
1.5.- The Hardware Components 10
1.5.1.- The mOP+10 communicative equipments 10
1.5.2.- The Headsets 11
2.- INSTALLATION 12
2.1.- The assistant of installation 12
2.2.- The first execution: To configure EasyLAB and to create file installation for all the students 14
2.2.1.- EasyLAB Configuration 16
2.2.1.1.- Generate client 16
2.2.1.2.- EasyLAB configuration 17
2.2.1.3.- Data Base 20
2.3.- The Installation in the Student's Site 23
2.4.- Uninstall EasyLAB 26
3.- Optimas technology 28
3.1.- The teacher's user interface 28
3.2.- The EasyLAB Use.....30
3.2.1.- The EasyLAB working area 30
3.2.2.- The Working Groups 34
3.2.2.1.- The creation of Groups 34
3.2.2.2.- To switch on and to switch off the microphones 37
3.2.2.3.- The situation of the teacher in the groups 38
3.2.2.4.- To get out from one Group. To cancel channels 39
3.2.3.- The Audio and Video Broadcasting Channels 40
3.2.3.1.- The activation of Channels 43
3.2.3.2.- To associate the students to the activated Channels 47
3.2.3.3.- To stop the channel broadcasting. To change the broadcasting source 48
3.2.3.4.- The DVD broadcasting channel. Some short notes 49
3.2.4.- The conversation in Pairs 52
3.2.4.1.- The consecutive Pairs 52
3.2.4.2.- The random Pairs 54
3.2.4.3.- The manual allocation of pairs 55
3.2.5.- The general functions of control 56
3.2.5.1.- To listen to a student: the monitoring function 57
3.2.5.2.- Private conversation with a student 57
3.2.5.3.- General call 58
3.2.5.4.- To block a student's computer 59
3.2.5.5.- To control the students' computer 60
3.2.5.6.- The sequential monitoring of screens 61

3.2.5.7.- To monitor a student's screen 63
3.2.5.8.- To deny applications 64
3.2.5.9.- To execute applications 67
3.2.5.10.- Detailed view 68
3.2.5.11.- The mosaic view of screens 70
3.2.5.12.- The Normal View 72
3.2.6.- The teacher's profile and others configurations 73
3.2.7.- Resource Management 76
3.3.- Advanced examples 79
3.3.1.- The interpreter 79
3.3.1.1.- Step 1 79
3.3.1.2.- Step 2 80
3.3.1.3.- Step 3 80
3.3.2.- Pictionary 81
3.3.2.1.- Step 1 81
3.3.2.2.- Step 2 81
3.3.2.3.- Step 3 82
3.3.2.4.- Step 4 82
3.3.2.5.- Step 5 82
3.4.- Frequently Asked Questions 84
3.5.- Supported Formats 86

1.- INTRODUCTION

1.1.- ABOUT THIS MANUAL

This manual is made up by three clearly differentiated blocks. As first block: this brief introduction in which we are referring to some new terms to let you be familiar with them. In the second block we will focus on the **EasyLAB Sound System Plug&Teach** installation, both software and hardware components (including the optional items), and at last, a third block in which we intend to explain how to manage the EasyLAB software.

The last block will be the most important part of this document because in general terms you will not need to install yourself the software, then our mainly purpose and real aim using this manual is to teach you since the beginning how to manage this tool. And little by little, meanwhile you are advancing in the manual lecture; you will become yourself an expertise administrator of your multimedia classroom.

As you might have observed, if you work with this manual in a PDF format (without using the paper form) you will be able to navigate easily through all its sections. Just doing one click on the index section you wish to navigate.

At the end of this manual, there is also a link that will let you get back to the index easily with just one click, in order to repeat the process as many times you need to do it without getting through the entire document manually.

1.2.- SOME BASIC NOTIONS

Let's us start from the beginning, a basic multimedia classroom should have available as minimum an equipment for administering the teacher's tasks and some others equipments for the students, all of them interconnected by means of a computer network.

Once we have gotten this simple and familiar framework, we are able to equip the classroom with the EasyLAB. The teacher will be able to, always by means of his/her computer, offer any kind of multimedia resources towards the students' computers, either for the entire classroom members or a determined assembly of them. You will see that the teacher will be able to work with multiple multimedia resources both simultaneously and independently.

By means of EasyLAB you will be able to supervise the work is being achieved by the students directly from your own equipment, in a simple way and in real time. You will be able to communicate with every student or even to take over any student's computer with the purpose of giving him/her assistance for doing any task.

This is, in general lines, what offers EasyLAB, nevertheless when you have known all its functionalities you will able to design endless and innovative activities for yourself and your students, you will take advantage of all the features of your multimedia classroom, allowing the students' and the teacher's interactivity during the achievement of your classes.

1.3.- WHAT IS EASYLAB?

EasyLAB is the state of the art, revolutionary technology which combines hardware and software, also it is designed to optimize the use of IT classrooms, and turn them into really pedagogic and multi-purpose spaces (including an audiovisual projection booth or even an ultramodern language laboratory of the latest generation.

EasyLAB is the first technology on the market capable of transmitting by means of the computer network audio and video resources in *Real Time*. If you have settled EasyLAB you will not need to wire your classroom with an especial network neither for audio nor for video.

EasyLAB is the essential teaching tool that brings the teacher the capability of achieving a full communication with the students, sending of audiovisuals resources to the students' sites (in both analogue and digital formats), controlling and supervising the student's tasks from the teacher's site and administering the classroom in a agile and intuitive way through its simple graphic interface.

1.4.- MINIMUM REQUIREMENTS

1.4.1.- Requirements of the students' computer equipments

Minimum requirements:
Pentium IV 2,8 GHz. or AMD Athlon 64 3500+ Processors
512 Mb RAM (256 Mb free).
40 Gb. Hard Disk free.
An AGP 128 Mb Graphic Card.
A 800x600 32 bits resolution.
A 10/100 Mbps Network Card.
1 USB 2.0 free.
Microsoft® Windows® XP SP2.
Microsoft® Windows® 7 (32/64 bits).

1.4.2.- Requirements of the teacher's computer equipment

Minimum requirements:
Pentium IV 3,2 GHz. or AMD Athlon 64 4000+ Processors
2 Gb RAM (768 Mb free).
80 Gb. Hard Disk free.
A PCI Express 256 Mb Graphic Card.
A 1024x768 32 bits resolution.
A 10/100 Mbps network Card.
2 USB 2.0 free.
Microsoft® Windows® XP SP2.
Microsoft® Windows® 7 (32/64 bits).

1.4.3.- The requirements of the classroom network

The switch should bear the 802.1P QoS protocol which is especially designed for the traffic in multiple multimedia data emission with high performance in layer two.

It is advisable for reaching an optimal functioning that the switch has gotten a speed of 10/100/1000 Mbps, even though is acceptable 10/100 Mbps. Any other type of switch (including wireless devices) can not guarantee the correct system functioning.

If it is a manageable switch, it might need an additional internal configuration that will be carried out by the centre's computer technician.

Any other software that limits or reduce the computers' resources, or any other application that filters or blocks the communication through the network, impeding the 100% EasyLAB functioning will be centre's responsibility.

1.5.- The Hardware Components

1.5.1.- The mOP+10 communicative equipments

The mOP+10 equipment is a new and reduced advanced audio system. You should connect one mOP+10 device in each computer in the classroom.

MOP+10 Equipment

The headphone with microphone should be connected to the communicative equipment using the mini-Jack connector.

You can set the volume of this device (independently of the computer volume) from a small wheel located in the cable of the headphones.

As it is obviously when we include this device into your classroom, we are adding to each computer the required hardware for achieving a high quality audio communication, optimizing as much as possible the resources. In other words, the student's communicative equipments will bring you a better performance than a conventional sound card for PC and therefore there will not be necessary to install others audio cards into the classroom computers.

Both mOP+10 device and headphones are essential for the correct performance of your classroom ,therefore you will be supplied with your installation in every classroom. If some computer doesn't detect the mOP+10 device, it won't be able to work with EasyLAB.

1.5.2.- The Headsets

These headphones with an incorporated microphone (the assembly is called headsets) should be connected to the OP+08 communicative equipments, and not to the computer sound cards. They were especially designed for being used in the educative centres, assuring high levels of security and robustness, then they have the appropriate strength that serves to avoid damages in long term.

The headphones are counting with special foams for giving a full soundproofing; consequently the students will get easily a high concentration and attention in their auditions achieved in the classroom.

Microcasco RC-200

Thanks to the hard work that was done, the microphone design has gotten lots of improvements. For example even in a classroom with a minimum quantity of students, where there are several groups talking among them, it is important that the microphones were able to catch clearly only the speaker voice, lessening as much as possible the environmental noises which were produced by the students in the classroom, allowing also that others students carry out any other activity.

2.- INSTALLATION

2.1.- THE ASSISTANT OF INSTALLATION

If you already have your classroom fully operative (the system was installed successfully), and you want to begin to use the EasyLAB system and take the best of it, you can go directly to the third block of the *Optimas Technology* manual for learning more about its use.

EasyLAB will need that the computers have gotten Microsoft Windows® installed (both the teacher's and the students' computers). It is essential to have installed in the machine the Microsoft® .NET Framework 2.0, otherwise the program will not be able to be installed. You can find an installer of this version in the EasyLAB CD.

Once you have installed the Microsoft® .NET Framework 2.0, introduce the EasyLAB disk in your equipment. If the application do not open automatically, look for the executable **Autorun** inside the disk, for opening the installation program. A window as the following will be opened:

You can see this screen when you are executing the CD of installation

As you can observe, there are only four options, including the option of leaving from the installation, which are placed in the lower right screen part.

These options are:

- **To install EasyLAB.** Pressing on this option we will have access to the installing window of the EasyLAB. By default, the EasyLAB will be installed in the folder ***Program files*** of your system.

If you want, you can specify a different folder for installing the EasyLAB in your computer. Just follow the indicated steps in your screen and complete the installation. Please wait until the process of installation is finished. A status bar will indicate the stage of the installation respecting to the total time of installation.

- **To see manual.** Open the file on PDF format that contains the EasyLAB user's manual.
- **To see the license.**
- **To test the Network.** It is a simple application that allows us knowing if we have the appropriate network for obtaining the adequate functioning of the EasyLAB. Pressing on this option we will see a similar screen as the following:

Menú para testear su red

You only need to select the desirable card network among the recognised cards of the program and press on the title:"To test network". This process could take some time.

After this process, you will have the EasyLAB software installed in the teacher's computer.

Important issue: *You should remember that EasyLAB only will work if the* ***mOP+10 device*** *is connected to your computer through a USB port.*

On the contrary, it will appear an error message like this:

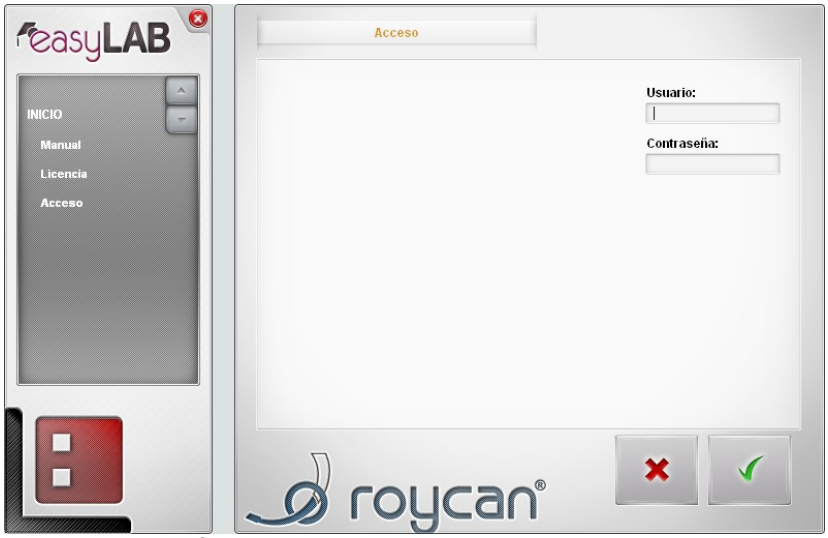
2.2.- THE FIRST EXECUTION: TO CONFIGURE EASYLAB AND TO CREATE FILE INSTALLATION FOR ALL THE STUDENTS

Once the teacher's software is installed, before executing EasyLAB, the first step to be achieved it is the execution of the EasyLAB configuring program.

You should know that if you try to execute EasyLAB for the first time, without configure it before, a message warning will appear.

You can execute the configuring program from the initial-menu of Windows® → All the Programs → EasyLAB → EasyLAB_config.

Once this program is open, you will see a similar screen as the following asking for a user name and password:

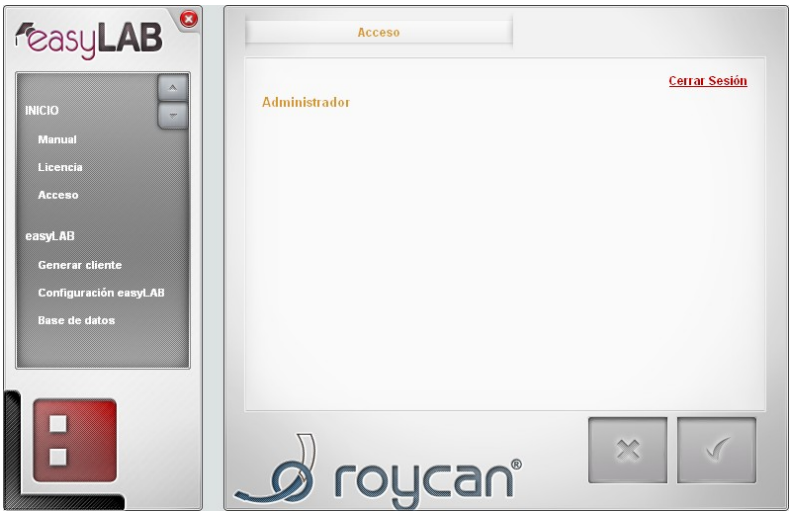


Access menu to configure EasyLAB

If when the program is opened and appears an error message telling you that the data base is not found, you should enter by means of the "admin" user's account and its password (supplied by default to the classroom administrator).

Therefore for having access to the configuring program options you should enter as the user's administrator. If you do not know his/her password and you need it for getting into the configuring menu, you can contact your classroom administrator or your distributor.

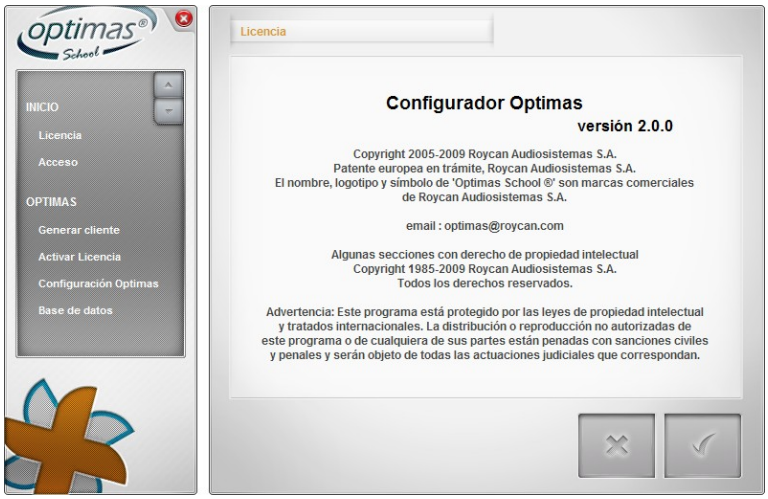
The aspect of the program after it has been unblocked with the Administrator's account will be similar as the following:



Access Menu with the logged administrator user's account

As you can see in this part of the menu you only have one link for getting back to the previous state, that it means, that you have only this way for closing the administrator user's session that you just have initiated.

The next part of the initial menu, as it is observed in previous images is the License information, where you can find our company and product legal information. Additionally you are informed about the software version that has been installed. In the next image we see a shot of this License agreement: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INICIO
Licencia
Acceso
OPTIMAS
Generar cliente
Activar Licencia
Configuración Optimas
Base de datos
Licencia
Configurador Optimas
versión 2.0.0
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License Menu of the EasyLAB configuration

We are going to dedicate a special session to the configuring program zone: the zone we have called as EasyLAB.

2.2.1.- EasyLAB Configuration

Inside this menu, you have the following essential options for configuring EasyLAB correctly in your computer equipment:

2.2.1.1.- Generate client

With the options that the configuring program bring by default, you already can generate your installation file for the clients and install it little by little in all the student's computer equipments. You will see a similar screen as the following:

Client generation menu of the EasyLAB configuration

Select the unit in which you want that the program saves the required data (if you have a data partition in all the clients, it is recommended to mark it in this point). In case of not having the clients' configuration (or that there is any of them without a data partition), you can select "System Unit", this way the data will be saved in the unit where was installed the operating system, and you will avoid any configuring problem.

The others options of the interface low part correspond to others configuring issues: the part of the communicative port is determined in the EasyLAB Configuration session, meanwhile the MySQL address is referring in the Data base. Hereinafter both issues will be seen.

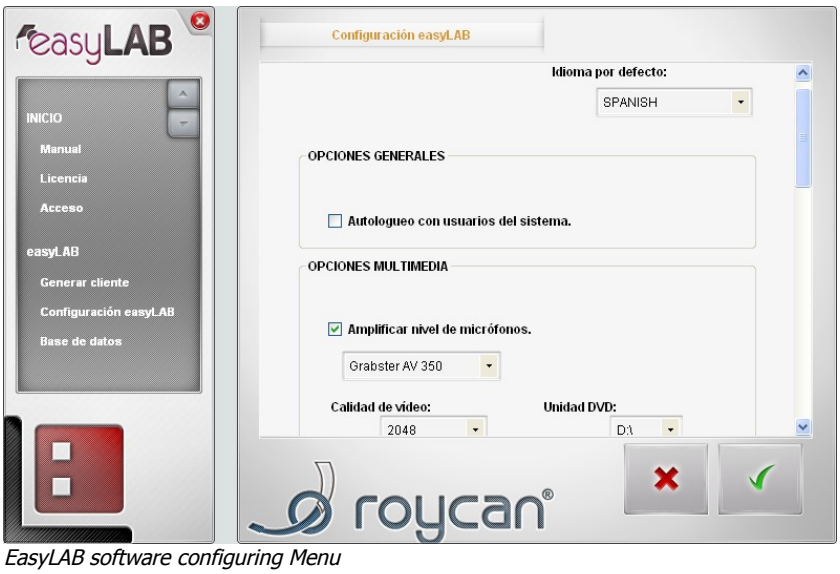
Once you have indicated the memory Unit, you can press on the button confirmation for creating the file. As soon as you press on you will see a screen as the following, where you can select which name to apply for saving the client's installation file and its path:

"Save as" operating system menu

Remember that this client's file, that you just have generated, should be installed in all and in each student's computers which have to be configured for the classroom, that is why we recommend create a shared folder for being able to access the others equipments and being able to install it into them. Also you can copy it toward an external memory device and bring it to every equipment where you want to install it. In the session of Client's installation we will see this process with more detail.

2.2.1.2.- EasyLAB configuration

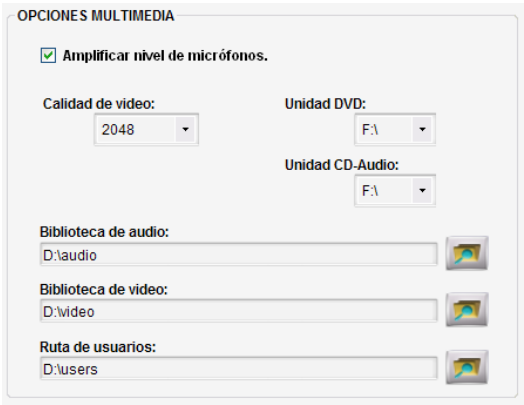
As you press on this option you will get access to the own EasyLAB configuring program:



EasyLAB software configuring Menu

Here you can indicate the language by default you want for working.

The "**Multimedia Options"** allow changing the way EasyLAB will recognise the unit driver by default, as the predetermined folders for the audio and video files. We see a detail of this interface part:



Detail of multimedia options configuration

- Amplify the microphone levels: Mark this option if you experience problems with the volume level.

- The video quality: by default it is been used at 1024, if you network has gotten sufficient power (1000 Mbps); it is advisable to change it into 3072. You should restore it toward its original value if after you've changed it the video emission is made less fluid than before.

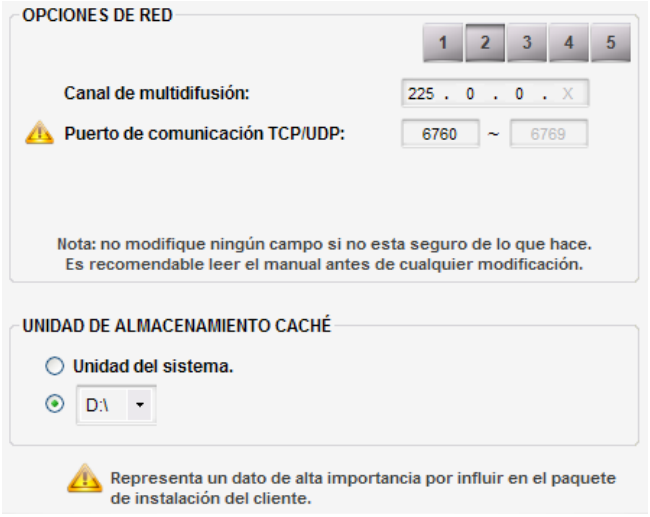
- The DVD and Audio-CD unit players by default: If you possess different CD/DVD unit drivers, you should specify the *letter of the unit* that they have for being identified in your equipment. This way, EasyLAB will recognize them automatically and you can use them simultaneously in several activities in the same class. If you possess only one unit driver, you should verify the *letter of the unit* you have assigned and select it for both components: the DVD and the Audio-CD drivers.

- Path for the audio and video library: If you wish, you should specify the folders, in which by default, you want to save audio and video files for being used as digital means of the library. EasyLAB will seek first these kinds of files in the pointed out folders.

- The user's path: It keeps the path in which the subfolders will be created for every user in the data base. In these paths we can save for example the personal files of every teacher.

> ***Note:*** If you want that any of these paths, previously commented by us, are shared folders in the network in another computer, you should configure in the computer where was installed already the EasyLAB, the access for getting these folders, as networking units.

After the Multimedia Options, we can continue with the **"Networking Options"***:* Through these options you can change how the system works into the network. If you do not know the meaning of any value, you shouldn't change its content.



Detail of network options configuration

The easiest way for configuring this paragraph will be to press on any of the buttons that you can immediately reach, they are labelled with numbers from 1 to 5.

Each of these buttons corresponds to a pre establish configuration for the computer network. As for example, if you have two Roycan classrooms in the same centre's network, the configuring process will be as easy as selecting the number one for one of them, and the number two for the other (or any other different number to the number given to the first classroom), that is how we can assure that both networking configurations do not get overlap each other.

Even though as we just have seen, it will not be necessary to modify manually these values. We are going to comment briefly every of these values for giving some notions about their utility:

- The broadcasting channel: you should specify the multi broadcasting address that you will use in the network. The multi broadcasting is known as the simultaneous data sending to multiple addressees through the network.

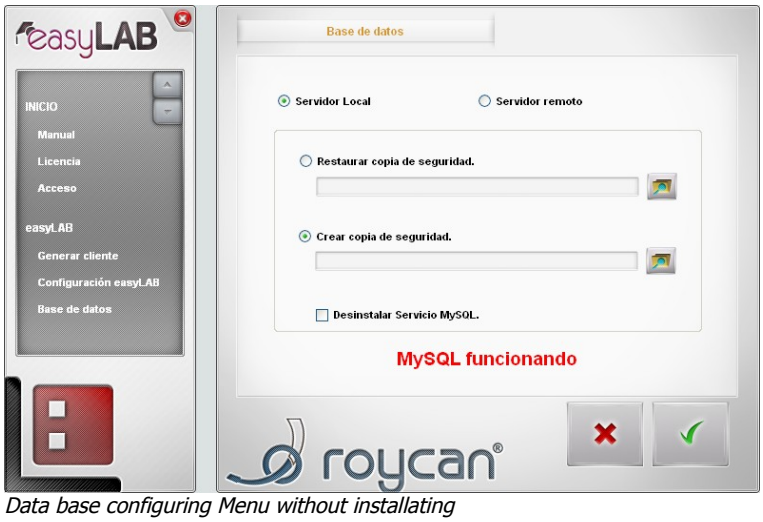
- The TCP/UDP Communicative ports*:* EasyLAB will use from the 6750, up to the 6759 communicative ports, by default. If you have others communicative programs that use any of these ports too, you should specify other available port in the first box. You also have to take into account that EasyLAB will use the next nine numbers too. Do not change these values if you do not know their meaning.

And finally, in the preceding image (previous page), we can see the part of the **"Cache memory drive"**, which is analogue to that we've seen in Generate client, but this time, what we indicate, it will be related with the teacher's installation (or EasyLAB server, where the students are the clients). That is why if you have one data drive in the teacher's equipment, it is convenient to indicate it here.

2.2.1.3.- Data Base

And finally, under this title we have assembled the optional items for configuring the data base that will work with EasyLAB for stocking the teacher's and the student's information. It is not essential that this option was correctly configured, because EasyLAB will work in any way, but with some limitations. That is why, if you have the possibility, we recommend you to install the server data base.

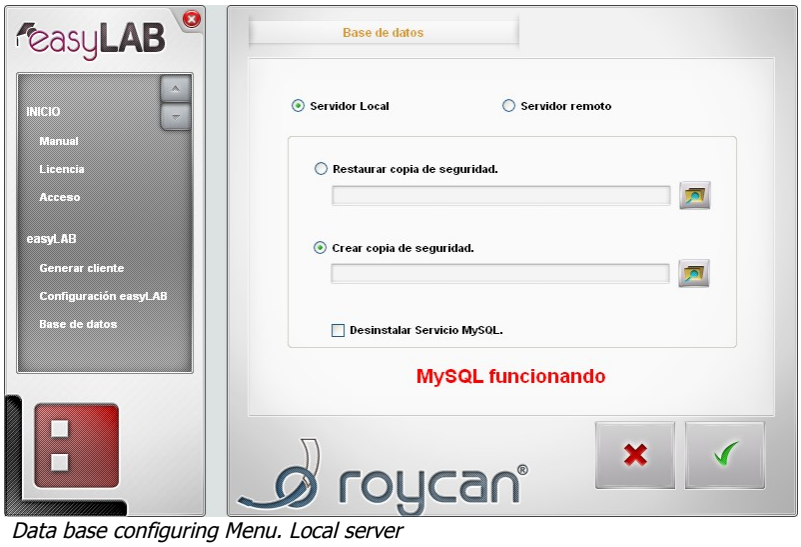
First of all, you will be able to see a similar screen to the following:



Data base configuring Menu without installating

As you can see, in principle, the data base is not installed in the system. For installing it, you just have to press on the confirming button.

Once it is been installed correctly you will see the interface as the next image:



Data base configuring Menu. Local server

By means of this *Local Server* menu we can Create or Restore a data base backup of the existing data base.

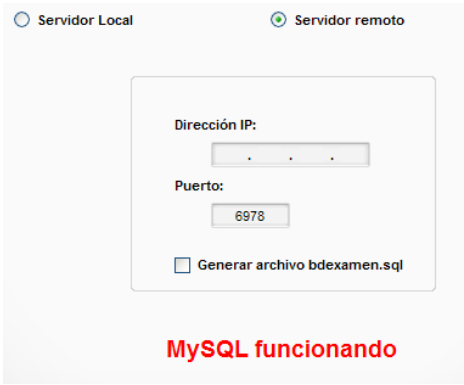
For creating a backup of the data that are found in the data base, you only need to write down a name for the new file you want that it holds the copy and press on the confirmation button. You can select the destiny folder for saving this file pressing on the button of the right text box.

If you want to restore this backup, select the *Restore copy* option, press on the right text box and select a file which contains a backup made as we've previously indicated it in the prior paragraph.

If for any reason you want to uninstall the data base, mark the *Uninstall MySQL service* and press on the confirming button.

> ***Note:*** *Bear in mind that if you uninstall the data base you will loose all the stocked data keeping inside. For that reason remember to do a backup first if you want to keep the data.*

Subsequently we will see the other part of the data base configuration: the option of configuring the data base by means of a *remote Server*:



Detail of Data base configuration. Remote server

If you centre have available an external data base server for the classroom, here you can point out the server IP address where it stays its data base service and the port which you will get connected through.

By means of the "Generate file bdexamen.sql" option you will produce this file which hold all the necessary boards for the correct data base functioning in the MySQL server that is available. On the other hand, it will be the administrator's task to execute this file in the remote data base server that it is configured.

2.3.- The Installation in the Student's Site

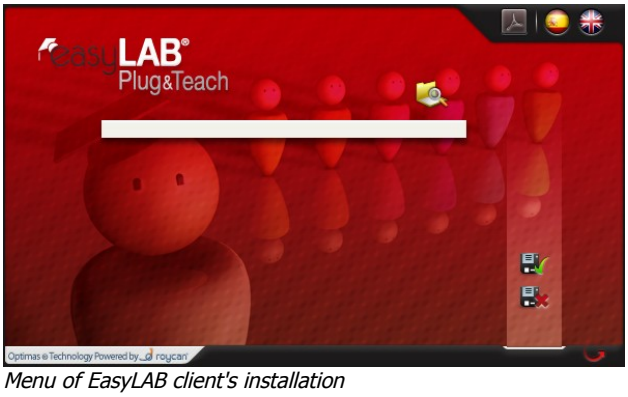
When you finally have gotten the client's installation file created in the previous point, you should check that the students' computers have installed at least the Microsoft® .NET Framework 2.0 version. Once you have done this you can install the client's file in each student's site. This file will size 20 MB approximately.

The entire process of installation goes through different stages, some of them are: the decompression of the files, the installation of the necessary packs and the software installation itself, for that reason, according to the speed of the equipment, this process may vary in its duration.

For avoiding security problems, we recommend you to install EasyLAB validated with a user account having the privileges of administrator. Otherwise, EasyLAB itself could obstruct the installation or configure the necessary modules for the right performance of the program.

This way, you should remember that if the equipment, where it is been installed EasyLAB, has any protecting system in its hard disk, like a security card or a blocking software (like the Deep Freeze) you should deactivate it for being able to carry out the installation, in such way that EasyLAB will always get installed correctly in the equipment.

After executing the client's installation file for the students' site, you will have access to a screen like this:



Menu of EasyLAB client's installation

As it is habitual,you should point out the specified folder where you wish to save the files of the program. By default, the program will save them into the **C:** unit, inside the "**Program Files**" folder.

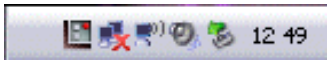
To continue, do click on the title to I**nstall.**

Then, you can observe the preparing process of the installation in the status bar, placed in the inferior screen part, which will indicate the proportion of the installation done at that moment.

When this process was finished, the client's installation will be concluded.

> ***Important issue:*** *Once the process of installation is finished, you should restart the equipment for assuring that all the changes have been saved and all the modules are installed and they will work correctly. If you have a protecting system like a security card or a hard disk protecting software, this system should continue deactivated during this second restarting, in which the installation will get to its end. After a while you should reactivate it.*

When you restart the computer, you can observe in the task bar the small symbol of EasyLAB, next to the clock and close to others icons:



Task bar with non active EasyLAB icon

In case that the program is also active in the teacher's site and both equipments are perfectly communicated through the network, the EasyLAB symbol light will change to green:

Task bar with active EasyLAB icon

Remember that you should repeat this process in all the computer students' equipments.

Note: *If you want that the students have totally deactivated the [CTRL]+[ALT]+[SUPR] keys' combination, you should have them configured in a working group, and not under a dominion. In addition you should activate the welcome screen (Control panel → User' s accounts → To change the way the users initiate and close session → to use the welcome screen), otherwise it will appear a warning message of Windows® when you press on this keys' combination in your students.*

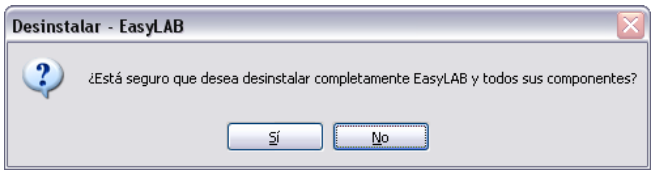
Note: *You can deactivate the switch on/off button of the students' equipments: Control panel → Energy options → Advanced options → Switch on button, select "Do not do anything".*

Important issue: *You should remember that EasyLAB only will work computers which have connected the* ***mOP+10 communicative equipments*** *through a USB port. In case the system wasn't able to find the student's communicative equipment, when we point out the EasyLAB icon with the mouse, it will appear a warning message like this: "SOUND EQUIPMENT NOT FOUND".*

2.4.- UNINSTALL EASYLAB

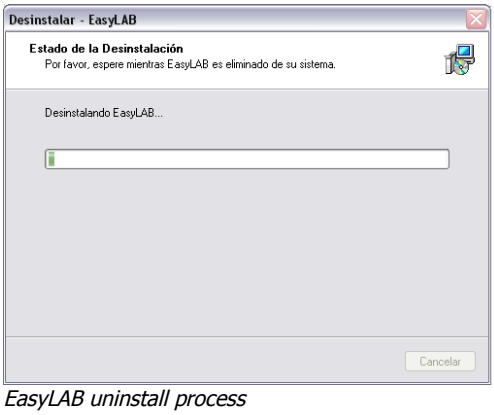
To uninstall the EasyLAB system in the teacher's site, you have different alternatives.

In the folder previously created for EasyLAB in the **Programs** menu, you will find a direct access to the uninstall item, even though you can choose also ***Add or remove* programs** from the Control Panel of Windows®.



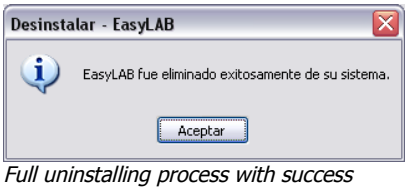
To confirm Uninstall EasyLAB

The first window will ask you if you really want to uninstall completely the program. If that is your option, just click on the button **Yes.**


Desinstalar - EasyLAB
Estado de la Desinstalación
Por favor, espere mientras EasyLAB es eliminado de su sistema.
Desinstalando EasyLAB...
Cancelar

EasyLAB uninstall process

Wait until the all the EasyLAB components are uninstall, in other words, wait until the process was finished. You will see a message like this:



Full uninstalling process with success

In the last window, do click on the **Accept** button and EasyLAB will be removed entirely from your equipment.

To uninstall the system of all the students' equipments you have two ways for doing it:

Just execute the "unins000.exe" file, you can find it in the path where you have installed EasyLAB in the computer students' equipments, or execute the same file that you have used for installing the client. The system will be uninstall automatically.

3.- OPTIMAS TECHNOLOGY

3.1.- THE TEACHER'S USER INTERFACE

The EasyLAB user interface is extremely simple and intuitive, and for that reason, it allows the teacher starting to use the application since the first moment, even though he/she does not have any knowledge about its management.

Vision of the EasyLAB main menu

Its use is based in a series of buttons, by means of icons and emergent messages. The messages come out when we are passing through the icons with the mouse cursor explaining clearly what are the icon's functions. The great majority of these functions are administered by means of the typical process of dragging and dropping, for example the creation of *Groups*, *Pairs* or *Broadcasting channels* (in the following paragraphs we will describe with more detail all the existing functionalities and the way to use them). Others control functionalities, like the *Monitoring*, the *Private conversation* and *the General call*, can be activated quickly just clicking on them.

Observe the form of the buttons, this will help us to learn how to use them, the rectangular buttons have to be used just doing click on them as any other normal button, and the circular buttons have to be used dragging any object from the interface to them.

In the student's site doesn't exist a graphic interface, it appears only an icon in his/her Microsoft Windows® or Linux Task bar. The students only will work with a group of emergent windows. These emergent windows will be deployed from the task bar for informing about any important event, to advise when the teacher is communicating to the site, or for informing the student that he/she was matched with another student, etc.

3.2.- The EasyLAB Use

3.2.1.- The EasyLAB working area

The EasyLAB working area for the teacher's site is made up by 5 important blocks:

Panel of groups and pairs: By means of these buttons the Working Groups *and* the *Pairs* are made quickly during the class. Their way of operation, in general terms is accomplishing by dragging and dropping icons with the mouse. Then we only have to drag the students we want they made part of the group towards the button group. If you have the tactile screen, you will have available all the EasyLAB functions when you point the finger at the screen. That's why the EasyLAB buttons have a relatively big size, and this fact facilitates to use them by means of the touch screen.

Panel groups view.

The Panel of control functionalities: It is an ensemble of buttons that allow the utilization of the general communicative and control tools over the students, applied individually, by student groups or taking the assembly of the classroom members.

Panel functions view

Classroom view: The central area of the EasyLAB interface hold all the icons that represent the teacher, each student and also the devices that were connected in the classroom.

These icons can be spread and organized according to different parameters showing all the required information for knowing the classroom state, and as we will see later, there are different ways of representing it: by means of icons or a board, etc.

Central area view of the application.

Panel of channels: The *Channels* are spaces through different audio and/or video format contents can be projected for being used by the teacher, and offered to the students. By means of the buttons of this panel, you can activate easily these *Channels* and decide what element will be the audiovisual source, and then to assign the students or *Groups* to the channels you want.

Channels and broadcasting sources panel view.

The panel of player: This is the interface space part that initially appears empty and where the activated source icon will be shown according to the channel that was selected in that moment.

This zone will appear automatically when we start to emit signs through the different Broadcasting Channels.

Playing panel view

Getting to this point, you can experiment how easy it will be to emit video, or any other resource by means of the EasyLAB:

- First of all select the Channel in which you want to achieve the emission.
- Then, do click on the broadcasting source you want to emit through, for example, digital video. You will see a screen for selecting the file you want emit. Just select one and the playing will start through the channel, even if you do not see the video in any computer equipment yet.
- Now select the icon/icons (you can choose the students or the teacher) you want as the video receivers.
- And at last drag the selected icons in the previous point until the mentioned channel button of the first step.

For coming undone this action, click on the cross that will appear in the playing panel.

> ***Note:*** *To select simultaneously more than one icon, use the* ***[Ctrl]*** *key from you keyboard and click on every icon you want to select, or define an area of selection clicking on the interface's zone in white bottom and drag the mouse over the icons you want to select.*

Hereinafter we will see also how the resources are emitted towards the students' sites and how to use the rest of EasyLAB functionalities.

3.2.2.- The Working Groups

Outside others utilities -as the audio and video *Broadcasting channels*- and without interfering them, EasyLAB allows creating up to 6 simultaneous working groups. Do not confuse the *Channels* with the *Groups* due to the fact that EasyLAB will allow using both of them simultaneously.

The *Working groups* were made with the aim of speeding up the allocation of the same tasks to different working student groups. This *Working groups*, by default, are activating without the conversation option among the students by means of their microphones.

There is not limit in the number of students for every *Group.*

For making a *Working Group* behaves as a *Conversation Group* (to allow the students communicate among them), you should activate the student's microphones manually.

Moreover, the majority of the EasyLAB functionalities are developed for facilitating and taking advantage of the work with these *Groups*, as you will see that for using the blocking function or launching applications you will need to conform these *Groups*.

3.2.2.1.- The creation of Groups

For creating these groups there are 6 buttons in the left inferior part of the interface program. Each group is identified by one colour: yellow, orange, red, purple, blue and green.

Panel of groups for EasyLAB

In the middle of the interface (the classroom view) are located the icons which represent each student's site in the classroom:

To add a student to a determined *Group,* select the student's icon and drag it until the button *Group* you wish. In that moment, the student's icon will get the same colour of the chosen *Group*. In this example we have incorporated the student's icon into the orange *Group* :

Look that, when a student's icon enter into a *group* it appears in the right superior part the classical speech bubble, which indicate us if the student can or can not talk. As we have commented before, by default, when we incorporate a student's icon into a *group*, its microphone is deactivated.

Also look, that those groups in which you have added some student, they will appear illuminated in the panel of buttons:

To add more than one student's icon into a group simultaneously, press the***[Ctrl]*** *key* of your keyboard and at the same time click on the students' icons one by one in order to select more than one icon, or you can define an area of selection just clicking and dragging with the mouse for widening the selection. Then, choose one of the selected icons and without dropping it, drag it on the button group, the same procedure that it has be done for one student's icon.

The EasyLAB interface will have the next appearance when a *group* is created:

EasyLAB main panel view with a created orange group

In this case, 12 students of the classroom are part of the orange *Group*, and any of them have activated their microphone.

3.2.2.2.- To switch on and to switch off the microphones

For choosing which student is able to speak to into the group, all you have to do it is to click on the *speech bubble* of the student's icon with the mouse. You can observe how the *speech bubble* changes and indicates that now the student's icon has an activated microphone. For deactivating the student's microphone just click on the *speech bubble* once again.

As soon as a student has his/her microphone switched on, the others students of the same *Group* will be able to listen to him/her.

Trick: *If you do a multiple selection of students, dragging with the mouse or using the [Ctrl] key, when you click on the speech bubble of one student's icon, all the others selected students' icons of the same group will switch on or switch off too.*

3.2.2.3.- The situation of the teacher in the groups

When you have several *Groups* in the same classroom, you will not be able to listen to them simultaneously, and in the practice this is impossible. The teacher will be able to choose in every moment which group he/she wants to listen to or to stay with, just doing the same operation that he/she would do for introducing a student in a group.

In the previous image the teacher's icon has joined the orange group. As you can observe, the teacher's icon has not changed its colour as the student's icons do (it will remain always green), but in its right side appears an small icon which represents the group it has joined.

On the other side, the same thing that is used to occur with the student's icons, when the teacher's icon is joining a group the teacher's microphone is deactivated. In other words, the students will not perceive when the teacher is entering to their group and they will follow their talking.

The teacher can switch on his/her microphone in the same way he/she does with the students' microphones, just clicking on the speech bubble with the mouse:

At this moment, all the students that belongs the orange Group will hear the teacher independently if the students have or not switched on their microphones.

Observe that, in the square *Group* buttons, if you have switched on the microphone inside any of these groups, the aspect would be as follows:

Look that, the small button which represents the teacher's icon next to the main *Group* button will light, this way the teacher will know quickly to which *Group* he/she gets inside when he/she has switched on the microphone.

> ***Shortcut:*** *If you click on the small teacher's icon directly, next to the main Group button, you can avoid to enter first into the Group and then to switch on its microphone, because when you click on this button, these two steps will be done at once simultaneously.*

3.2.2.4.- To get out from one Group. To cancel channels

For getting a student's or teacher's icon out from a *Group*, you should do the same thing you did for introducing it: just drag the icon until the button *Group*.

For changing a student's icon from one *Group* to another without taking it out previously from its group, it is only necessary to drag it towards the new group in which you want to put it.

If you want to cancel an entire *Group*, in other words, to take all its components out, just click on with the right button of the mouse directly the button *Group*. Automatically, this *Group* will be deactivated.

3.2.3.- The Audio and Video Broadcasting Channels

EasyLAB has five broadcasting channels (having a number from 1 to 5) that allow transmitting audio and/or video sequences from the teacher's to the students' sites.

The audiovisuals contents can proceed from 8 different sources for being emitted through the *channels:*

- **DVD**. Videos stocked on DVD format. Some DVD's menus brings a sort of interactivity, which make the activation of this channel differs to the others EasyLAB channels. It is important to learn how to use this channel. For that, please see the point The DVD broadcasting channel. Some guidelines**,** describing step by step how to work correctly with this *broadcasting source* in concrete.

- **CD-Audio**. Conventional compact disk with audio tracks.

- **Digital video file**. Video files that are stocked in the hard disk, including different file formats: MPEG, AVI, WMV, etc.

- **Audio digital file**. Sound files that are stocked in the hard disk, including different file formats: MP3, OGG, WAV, M3U or WMA.

As we have just mentioned previously you will be able to open playing lists in M3U format. These kind of lists are as kind of *data bases* which have different audio files information that you might want to play, therefore you can stock your own playing lists without open every file separately. When you use these lists you can speed up your work with the audio files. There are a big quantity of free program that allow creating playing lists.

- **External analogical visual signal**. The system possesses an audio and video signal converter-concentrator. This device allows, by means of a unique USB interface for the teacher's computer, the connection of several audio and image devices, as the VHS/DVD playing combo, an audio cassette, a video camera, etc. Using this source, the teacher will be able to transmit in real time any signal coming from analogical devices which were connected to your classroom.

- **Auxiliary entrance.** By means of this source we can access the auxiliary entrance of the equipment, where we can connect several devices as audio audio cassette readers, MP3 players, etc. through a JCK or RCA normal entrances.

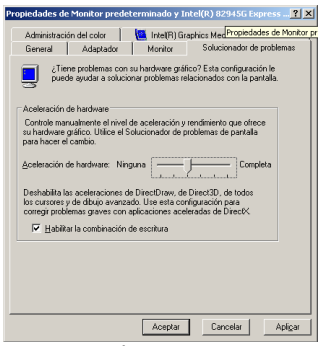
- **Teacher's monitor**. Source for broadcasting the image and sound of the teachers' computer, in other words, it allows the transmission of the image computer towards the students' sites. This source is very convenient for the teachers, for example when they want to carry out demonstrations for explaining the use of programs.

We recommend you neither to emit local video in the teacher's computer and nor to use it as a source for sending resources to the students, because, for that purpose you already have available the digital and analogue video channels.

Even though, there can be a program in which you want to achieve a demonstration with dynamic sequences or even short videos that you want to show to the students at the same time you are showing your monitor.

In case you need this special configuration with the purpose of sending some dynamic sequences through the teacher's monitor, you will be able to configure the graphic card in the next way, but be aware that the graphic card will be limited, and there will probably cause problems over some classroom users. Therefore you should re-establish the values, just getting back to its original configuration at the end of the class. For that, in the teacher's computer, go to the *Panel of control* → *Screen* → Configuration → Advanced options → *Solution of problems,* and go down the sliding of hardware acceleration to the second level.

In the next shot, we can see how the sliding thing should remain for obtaining the correct functioning when we emit video through the teacher's monitor:


Propiedades de Monitor predeterminado y Intel(R) 82945G Express ...
Administración del color
Intel(R) Graphics Med
Propiedades de Monitor pr
General
Adaptador
Monitor
Solucionador de problemas
¿Tiene problemas con su hardware gráfico? Esta configuración le puede ayudar a solucionar problemas relacionados con la pantalla.
Aceleración de hardware
Controle manualmente el nivel de aceleración y rendimiento que ofrece su hardware gráfico. Utilice el Solucionador de problemas de pantalla para hacer el cambio.
Aceleración de hardware:
Ninguna
Completa
Deshabilita las aceleraciones de DirectDraw, de Direct3D, de todos los cursores y de dibujo avanzado. Use esta configuración para corregir problemas graves con aplicaciones aceleradas de DirectX.
Habilitar la combinación de escritura
Aceptar
Cancelar
Aplicar

Screen Windows view:
Monitor features

> ***Warning:*** *Remember not to use this broadcasting source for emitting video sequences from the teacher's computer. Only in case, it is indispensable or because you need any other and less common function (for sending video just use the broadcasting sources for this purpose). Remember that if you do it by means of changing the graphic card configuration, as we have commented before, you should get back to the initial state of the classroom, otherwise it can carry out problems for other users.*

- **Student's screen**. Source for broadcasting the image student's computer, for example, for exposing a work to the whole classroom or to a student's group. For using this option, you should select first the student's icon which correspond to the student's screen you want to emit from the classroom view and then click on the student's screen icon.

The *Channels*, as it happens with the groups, have their own panel of buttons which is located at the bottom of the EasyLAB interface:

Panel of broadcasting sources and channels for EasyLAB.

We can see that in the left part of this panel are placed the buttons to select the different image and/or sound sources. Please **do not confuse the Channels with the Broadcasting Sources**.

In the right part, as video shots are placed the icons which represent the different available channels.

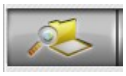
3.2.3.1.- The activation of Channels

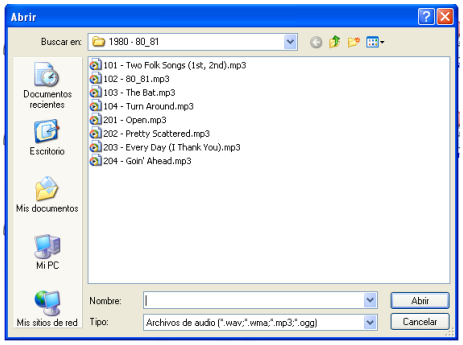
To activate a *Broadcasting Channel*, first at all we have to select it (by default it always will be selected the first channel), and then, you should press on the source you want to be emitted through the *Channel*. In other words you should click on the number of *Channel* you wish, observe how the button will light after it has been selected and right after you can do click on the source button.

The selection of a video for playing it by means of a channel

Look how by means of this new screen that appears in the right part, you can choose the file you want select for being able to emit it through the selected Channel. By means of these two buttons that are placed in the superior right part, you can accept or cancel their selection:

Moreover, this screen has 4 buttons more, the next will open the typical window of Microsoft Windows® to "Open file":





Window to open a file

The next three buttons can be used to change the filter applied to the files that we are seeing or change the place since from where we are acquiring the resources:

It deletes the filters that might exist when the files, we want to open, are visualized.

It indicates the personal folder for the teacher.

They indicate the primary and secondary data warehouse respectively.

> ***Note:*** *The personal folder can be placed in a server and, therefore it will be shared with the rest of the classroom users, or in the own equipment. This folder is used for creating others sub folders with the user's names that the teachers have validated in the computer. This way, the EasyLAB will recognised automatically how the teacher gets validated and open any specific folder.*
>
> *In resume, each teacher that uses the classroom can create inside his/her personal folder; one specific for him/her with the user's name and this way by default he/she will work in his/her sub folder.*

> ***Advanced:*** *It is possible to emit the same source through two different Channels. The most interesting thing is that in every channel, we can put the playing point in different places of the file. Take into account that you can do this only with digitized files, because by means of the CD/DVD driver there is only possible to have access individually, due to the physical limits that CD drivers have.*

In any case, EasyLAB will start automatically the playing and the broadcasting of the selected sources, an standard playing will be shown at the left side panel of Channel buttons:

EasyLAB player detail

From this player you can pause the audiovisual emission, stop it or to place it in a concrete point through the sliding item. Observe how, in the lower left part you have a time counter reporting the emission time, in the central part, you will see the name of the file that it' s been playing and in the right side it's indicated you the remaining time of the emission.

When a *Channel* is active (in other words, a source is been played through it), you will see a red shot passing through the drawing of the film or file. This indicates that the diffusion by means of this Channel is performing, but until you do not associate the students' icons to a *Channel*, nobody will be able to see what is emitting through this channel.

Detail of the active number one EasyLAB channel

3.2.3.2.- To associate the students to the activated Channels

For specifying which students' icons will be placed in a certain *Channel*, just drag the students' icons until the *Channel* shot you wish (remember that is easier and useful to drag the button of the *Group* directly), as the operation we have done with the *Groups*. When a student' s icon is being receiving an emission through a *Channel*, besides its icon you will find a small symbol which represents the number of the *Channel* that was allocated to it.

> ***Warning:*** *It is important to remember that we can not allocate the students' icons to the Channels if we haven't activated any source for being emitted through them before. In other words, it is impossible to allocate the students' icons to a Channel which wasn't activated first.*

For taking a student's icon out of the emission, just repeat the same operation of dragging and dropping it on the channel shot. For taking all the students' icons out, just stop the playing which is been emitted.

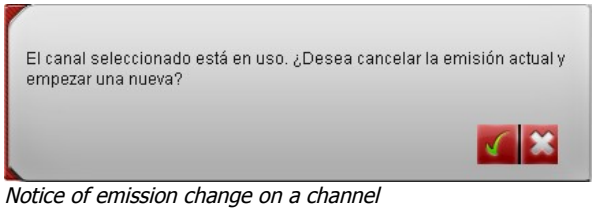
> ***Advanced:*** *Groups and channels can operate simultaneously, separately or in a mixing way. For learning how to program different activities using both tools, consult the point 3.3. Advanced examples.*

3.2.3.3.- To stop the channel broadcasting. To change the broadcasting source

For stopping an active *Channel*, you only will have to click on the cancel button that is placed in the left player. After doing it, all the students' icons which were allocated to it, will be disconnected from the channel automatically.

To deactivate a channel which is being used.

If you want to change the *broadcasting source* of an active *channel*, it will not be necessary to stop the playing and soon after to allocate the new source. Just select the channel and click on the new source button. It will appears a message like this:



Notice of emission change on a channel

Just accept to change automatically the broadcasting source you want to play.

> ***Warning:*** *Remember that when you press on the cancel button, the channel will be fully closed, that is, we just stop broadcasting through it; otherwise, if you want only to stop the playing you can use the Stop and Pause buttons from your own player.*

3.2.3.4.- The DVD broadcasting channel. Some short notes

As we have commented during the introduction of this chapter, the integration of the DVD menus through the EasyLAB system has demanded us to modify a little bit the activation process of this broadcasting channel in concrete.

First of all, we should introduce the DVD that we will start to use.

Now we select the channel we want to use and we press on the button that corresponds to the DVD's source:

After pressing the button of the source, a window will appear showing the first DVD track playing that we want to see, that most of the time will be the video.

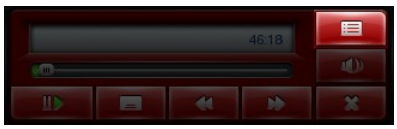
> ***Note:*** *You can press on the [CTRL] key and click on the DVD broadcasting source at the same time, to let the EasyLAB system to try to open the DVD menu, otherwise it will try to open the video track directly. As soon as you press the [CTRL] key you will see how the DVD source button changes:*
>
>

There are some videos that do not have menu, therefore this little screen will appear in black colour. For having access to the video just use the **forwards** and **rewind track buttons** until you will find the beginning of the playing:

Preview view of the DVD player

> ***Note:*** *Do not worry if you select to initiate the video playing and after a while of playing you notice that you have wrongly selected the audio track or subtitles, because the EasyLAB system offers a simple way for selecting any audio track or subtitle just after the video playing has begun.*

Once the video playing starts, you should press on the button called "**Hide video**" which is placed in the EasyLAB player:



Hide video

At that moment, we already have an activated channel. Below we can see two new player buttons, next to the button called "Hide video":

Subtitles and DVD audio performing

Pressing on the previous buttons we can change easily the language of subtitles and tracks without altering the DVD playing:

Selection of audio track from the playing menu.

Selection of subtitle track from the playing menu.

Now you can work with this channel as you will do with the others. If you want to see what is emitted through your teacher's screen, you will have to drag the teacher's icon and put it into the channel. And the same thing as for emitting to the students' sites, you can drag the students' icons or Groups to the Channel.

Remember that in any moment of the playing, you can change the audio track or the subtitles by means of the *language and subtitles buttons.*

If you want to get back to the DVD original menu, you should close the channel (pressing on cancel player button) and activate it again as we have indicated in this point.

3.2.4.- The conversation in Pairs

Without being relevant the *Groups of conversation* and *Channels* that were probably fit out in the same class, EasyLAB allows matching the students for achieving conversation activities in pairs. The system will leave us to arrange until 50 student's pairs per classroom.

These pairs can be conformed selecting the students' icons located physically, in a consecutive, hazardous or manual way.

For fitting out the *Pairs function*, you posses two buttons on the right part of the panel of Groups (observe how after EasyLAB has begun these buttons are deactivated, because there is not any student selected:

The creation of pairs.

3.2.4.1.- The consecutive Pairs

The first button allows matching the students in a consecutive way, depending on how they are physically located in the screen viewing of the teacher's screen. For making pairs, you have to select an ensemble of students and drag them with the mouse or using the [Ctrl] key and doing click on the icons, for just selecting the ensemble of students. Then put the students' icons on the *Consecutive pairs* button.

Warning: If you select an odd number of students, you will not be able to activate this option, the pairs button will be turned off.

As soon as the pairs are conformed, each student's icon from the same couple will show a poster with the same coloured letter. Therefore each different coloured letter will represent a pair and the students will get identified easily. For improving their identification, each letter is represented by a different colour. In addition (and only for consecutive pairs, not for random pairs), the students will be able to see a window in their computers telling them who is talking to them.

Opposite to what happens when we place a student's icon into a Group, when we bring it into a Pair, the "speech bubble" item doesn't appear, the microphone is always switch on, this condition is intrinsic for this case. Therefore when the students' icons get matched in pairs, they always will have the microphone switch on and they can communicate to each other. In the student's screen, in the Microsoft Windows® task bar and just on the system hour, an informative blind will be deployed telling the student that he/she can communicate with his/her partner.

As soon as we have created a pair, the buttons for making pairs will remain lighted. To dissolve all the pairs, do click with the right button directly on one of these two buttons:

If you want to deactivate only a specific *Pair,* select one student's icon and drag it until the button of *Pairs.* In any case, when a student is not communicating any more with his/her partner, a blind will be deployed over the Microsoft *Windows® Task bar,* and it will inform about the ending of the conversation, as it did when the talking has started.

> ***Note:*** *The consecutive pairs are not made according to their assigned number of seat per student, but for the physical distribution of the students' icons in the teacher's screen, following the order from the right to left side and from up to down sides.*
>
> *You can organize always by hand the students' icons in the screen, but if you wish to organize them in an automatically way, according to several parameters, you should consult the point* 3.2.6. The teacher's profile and others configurations.

3.2.4.2.- The random Pairs

You can create *random pairs* just selecting the students' icons first, then every pair will be conformed by two students that EasyLAB selects randomly.

For the creation of *random pairs*, as for the creation of consecutive pairs, you should select a even number from an assembly of students, just drag the selected icons until the *random pairs* button:

The students' icons have the same form that the consecutive pairs use, then they will show up with their poster with a coloured letter which represents a Pair. In addition there will not be any "speech bubble", their microphones will get switch on by default.

The buttons for making pairs will get lighted as soon as there is any pair in the classroom, of any of both types (either consecutive or random pair).

To dissolve all the Pairs, do click directly on one of the two buttons for switch them off.

If you wish to deactivate only one pair, you should select any of the students' icons, and then drag it until the pairing button.

When we make *random Pairs* with all the students the EasyLAB Interface takes the next appearance:

View of all the classroom gathered in pairs randomly

> ***Advanced:*** *If you wish to unify the icons of the pairs and to regroup them in your monitor, in such way that they can be easily identified (placing the Pairs together.) please consult the point* The teacher profile and the others configurations*.*

3.2.4.3.- The manual allocation of pairs

In the previous methods for creating *pairs*, the EasyLAB program selects two students for conforming one pair according to the kind of *pair* or the distribution.

In addition, there is also the possibility of allocating manually the students' icons that should form each *pair*. For that, select at the same time two students' icons and drag them over one of the *pairing* buttons.

For doing this, the best thing to do is to click on the student's icon, pressing at the same time the [Ctrl] key in the keyboard, and then do click on the other.

> ***Advanced:*** *For speeding up the task of creating pairs manually, you can choose the option of creating consecutive pairs but, previously, you have to spread the students' icons on the screen, place them side by side. In other words, just get together the students' icons, select them and drag them until the consecutive pairing button.*

3.2.5.- The general functions of control

The functions of control allow achieving individual actions over each student, like the monitoring and the control remote functions, as well as global actions with the whole class, like the general call.

For these tasks, the EasyLAB interface has gotten one panel of buttons located in the lower right screen part. The first four buttons (from the left to the right side of the image), can be fully personalized: it means, that the teacher can choose which functionality will leave at sight without deploying the others:

Panel of functions of EasyLAB

All the functionalities of the previous panel get together through 4 buttons. Each button can deploy others buttons, just doing click on the arrow placed in their right side and this way we select the function we wish to apply.

The first assembly of buttons are relating with audio actions, both recording and communicative actions between the teacher and the students.

We will describe each button according to all its functions:

3.2.5.1.- To listen to a student: the monitoring function

This button allows the teacher listening through his/her headsets the sound that comes from any student's microphone. This functionality is available even if the student does not have his/her microphone switched on and he/she is doing whatever activity, in others words he/she is not being listened for the rest of the students or *working groups.* That's why we have called it our *monitoring* tool.

To use this tool, as others EasyLAB functions, first of all do click on the student's icon, you wish to listen to, and then, do click on the *monitoring* button. You can observe that, during the monitoring, the button keeps itself lighted.

At the same time, just next to the student's icon it appears a symbol, a headset, representing that the student is being listened to. Next to the teacher's icon shows up the same icon indicating that the teacher is monitoring a student.

To end the *monitoring* function, just press again on the *monitoring* button.

3.2.5.2.- Private conversation with a student

Without being relevant if the student stays in a *group*, a *channel*, doing pairs, or achieving an individual task, the teacher will be able to communicate with him/her privately, any time.

For communicating with a student, select its student's icon and do click on the control button of the panel:

At that time, the teacher's and the student's icon will represent this state of communication. In the teacher's icon will appear at its right side a small symbol representing that he/she is carrying a conversation with a student. At the same time, next to the student's icon a small symbol appears too representing the teacher. Look at them in the next images:

Observe that in these icons the "speech bubble" symbol doesn't appear, because the private conversation between the teacher and the student imply (in a intrinsic way) that both microphones are activated.

For ending the conversation with a student do click on the same button and the function will be deactivated.

Unlike what it happens with others control tools, the student will be conscious from his/her site when the teacher is contacting him/her. As soon as the conversation starts, a window is deployed in the student's screen. When the conversation has finished, it appears in the student's screen another message informing that event.

3.2.5.3.- General call

The general call designation is the stage that paralyses completely any activity that is been performing in the class, consequently, it is the ideal tool that allows the teacher to speak to the students and **all** of them attend him/her.

For activating the general call, just do click on the control panel button with the mouse:

In that moment, all the students will stop listening to their original computer sound, the sound from a *broadcasting channel* or from a specific *working group* and their screens will be blocked. During the *general call* only the teacher's voice will be heard.

The student's icon gets the following form during the *general call* :

To end the general call function, do click on the button again. All the EasyLAB configuration will get back to its previous stage. The students will find their computers in the same state they were before they become paralysed.

> ***Warning:*** *We can not apply the general call to one student's icon or to an assembly of them only. This function has been designed for affecting the entire class. For selecting manually the students' icons you want to block see the point* To block the student's computer*.*

3.2.5.4.- To block a student's computer

By means of the next assembly of buttons, you will get access to the control and monitoring functions of the computing students' equipments.

The first option is *To block the student's computer.*

For blocking a student's computer you should select first the student's icon and press on this icon. This function is useful when the teacher doesn't like that the students get distracted while he/she is achieving any important explanation. Also when the teacher is carrying out the blocking function, he/she can see which students are involved in this operation, because it appears a red screen icon next to them.

Depending on the version you have acquired, you can configure the program for allowing that an image comes out when the students are blocked (see the point The teacher's profile and others configurations).

You can select and block simultaneously several students' equipments. For unblocking the students, just select their icons again and press on the student *computer blocking button*, after that the students' screens will get back to the previous stage.

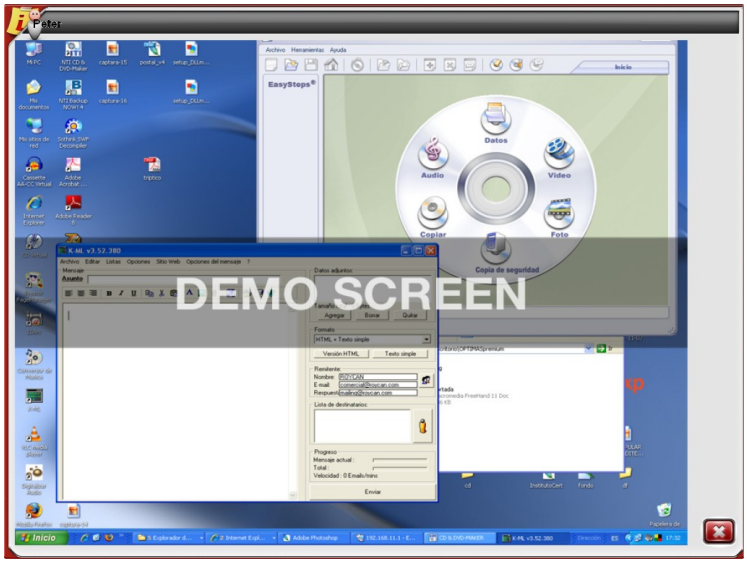
Remember that if you want to block the **whole** class the most appropriate function will be the General call.

3.2.5.5.- To control the students' computer

This function allows the teacher to control a student's computer from his/her computer, as he/she was sitting in front of the student's computer. For example, it can be very useful when a student in concrete needs to know how to use a determined program and it is convenient to give him/her a demonstration. The teacher takes over the student computer and the student will able to see all the steps which are carried out by the teacher.

For leaving off doing the control of a student's computer, just press on the icon with the cross that will appear in the lower right part of the screen when the student is being controlled.

Note that this operation only can be performed with one student in every moment. After closing this function with the red cross the teacher will get back to his own computer:



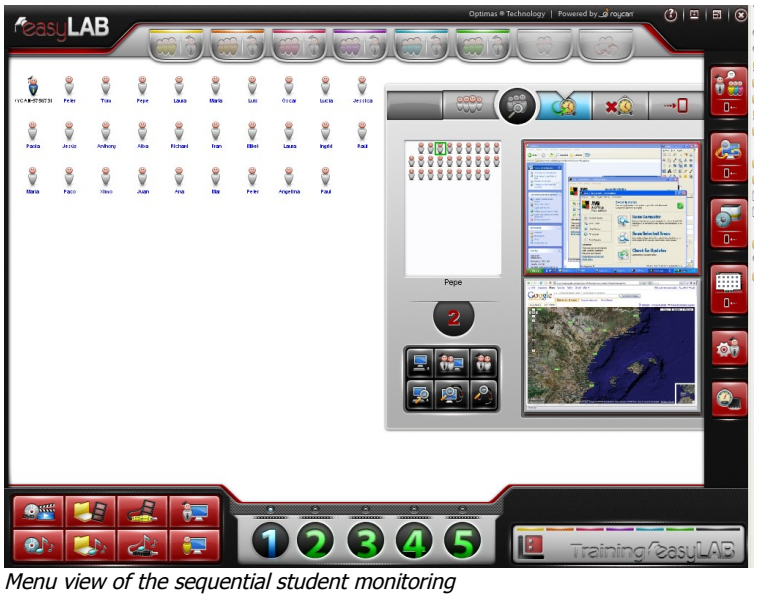
Controlling a student' computer

Observe how the previous image corresponds to a student's screen emitted through the teacher's computer. In the lower right side you can find the cross for leaving off this function and getting back to your own computer.

3.2.5.6.- The sequential monitoring of screens

This function allow the teacher to get through all the students' screens sequentially, watching them according to the set up interval time. This function has a nearly relation with the mosaic view (see the point The mosaic view of screens).

To use this function, you do not need to select the students you want to monitor, just press on the sequential screen monitoring button and you will get access to a screen as the following:

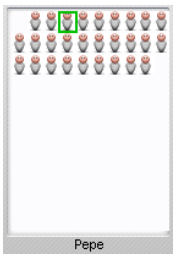


Menu view of the sequential student monitoring

Also you can drag a group (the same thing as for the Deny applications function), with the purpose of achieving only the tracking of those students which are included in this group:

Besides the two screens where you can visualize the student's screens (placed in the right image part) there are three different zones of buttons: up in the right part, there is one zone with three options: to stop, to restart the back counting or the green arrow for leaving the sequential screen monitoring mode:

A zone for selecting the students' icons, that it shows also which student is visualized in every moment.



Just pressing on the small students' icons you can go through all the students' screens easily. You can observe that there is a back counter which counts automatically the interval appearance time of each student screen, without the necessity of selecting manually any student's icon:

And at lasting in the lower left part, in which appear the back counter and two others line of buttons. These set of buttons allows achieving others functions when we will do the sequential monitoring with all the students, without the necessity of passing through the main menu of the application.

The central buttons of both lines are a combination of the others two buttons:

We can see in the first line, from left to right side: To control the student's computer, to take over the student computer and to talk to a student, and The private conversation with a student.

In the second line: we will see: To monitor a student's screen, To monitor both the screen and audio of a student, and To monitor the student audio.

> ***Trick:*** *If you drag a student Group towards the new window that shows up in the right part of the interface, you can achieve the monitoring of all the screens. Observe also how the monitoring function viewer has available a counter, which helps to go through from one student to another every 10 seconds or, by default, the time you have establish in you teacher's profile (see the point* The teacher's profile and the others configurations*)*

3.2.5.7.- To monitor a student's screen

To watch a student's screen in your screen, just repeat the same procedure that it has to be done for the *audio student's monitoring*; select the the student' s icon you wish to monitor and then do click on the *student' s screen monitoring button:*

To stop the monitoring function do click on the red cross, in the inferior right part while you are monitoring any student (as we've done in *To control a student's computer*).

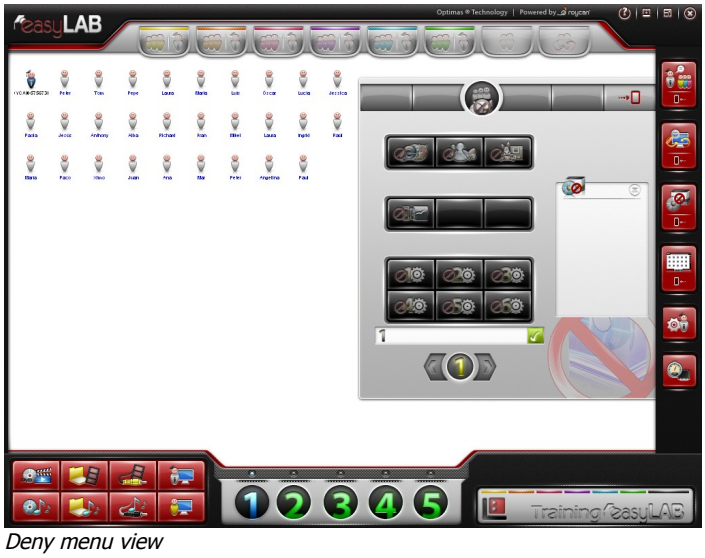
> ***Advanced:*** *Prove to combine the audio monitoring function with the student screen monitoring. Both options can be applied together, offering a total working supervision of the student, both image and sound.*

3.2.5.8.- To deny applications

The next set of functions are related with the execution or the banning (prohibition) of executing programs on the students' computers. By means of this set of functionalities we can share files with the students, deny or allow the execution of applications to the students:

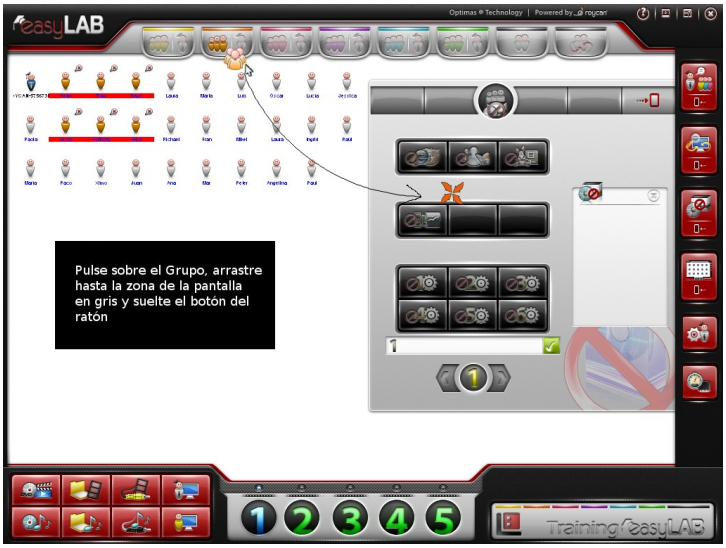
Using the first button you will deny the execution of certain applications in the students' computers, those you have chosen previously:

When you press on this button you will have access to another new screen that will let you to configure the applications you want to deny and to which student's groups.



Deny menu view

Observe how after you press the button called *to deny applications*, the new screen appears empty. For being able to work with this function, you should drag the students' groups you want to work with:


easyLAB
Pulse sobre el Grupo, arrastre hasta la zona de la pantalla en gris y suelte el botón del ratón
1 2 3 4 5
TrainingeasyLAB

Activating the deny applications menu

Remember that this function only will work if you drag the group button to the grey zone, otherwise, you will not be able to deny any application.

Drag the student's group until the grey part of the window for denying applications. This way we indicate to whom we want to apply the restrictions. Once we have chosen the users with restrictions, we can count with 4 applications that can be easily denied just doing one click: to navigate through internet, the instant messenger and the P2P applications or office applications.

As soon as we press on the button which represents the application we want to deny, we are restricting the use of the application to the users involved in the operation.

In this image you can see how we have denied the access both the Messenger program and the Office applications to the students of the orange group:

Both messenger and office applications were denied for the orange group.

Observe how the instant Messenger and the office computer pack buttons will get lighted. On the other hand, if any student has gotten any restriction on his/her computer, the student's icon will appear with a small padlock in the lower part.

The teacher has gotten also 6 buttons more for adding new programs for being denied to his/her students. The new programs also can be added into the teacher's profile, for saving these settings for another session.

For adding more applications, is enough writing the executable file name (it is not necessary to write the .exe extension) in the text square, then press on the mark of verification for matching the button to the same number. For ending and denying the application just press on the number button.

For getting back to the main window, press on the green arrow that goes to the right side.

> ***Note:*** *If you have denied some applications, and you close this window the applications will still be denied to the students.*

3.2.5.9.- To execute applications

By means of this function you will be able to launch applications to the students' computers.

The way is functioning is similar to the *Deny application* function. First of all, select the desirable student's *Group* and then press on the button that represents the application we want to be executed in the students' computers (see the point To deny applications, to see how to specify the *Groups* where we want the functions to be applied).

To execute applications menu view

With reference to the internet browser, we can indicate you a web site which will be used when the application was executing.

The rest of application buttons are for: the word processing software, the spreadsheet application and the application for presentations.

To execute a new application that it is not predefined you should write the full path (unlike what it happens with the Deny applications function), you can see that by default it appears the "**{app}**" chain. This chain represents the path for the applications which were installed, that most of the time will be "C:\Program Files\", you should use it for filling the program route.

Remember that the applications that you want to be executed on the students' computers have to be installed in the computers. The program only will execute them.

For example, to deny an application called "application.exe" (inside the Program files path and in a directory called "directory") we can write:

{app}\directorio\aplicacion.exe

After indicating the program path, just press on the mark of verification. In that moment the executable get associated to the button with the same number. Finally just press the button for launching the application to the students you are working with.

Observe how the buttons are flicking after launching any application. This suggest us that the application is executing, after a while (few seconds), the button will acquire the typical appearance, how if we had pressed on it.

> ***Warning:*** *Bear in mind that after pressing the button of an application, or the button of the number which is associated with, automatically the application is launched to the students' computers that are involved.*

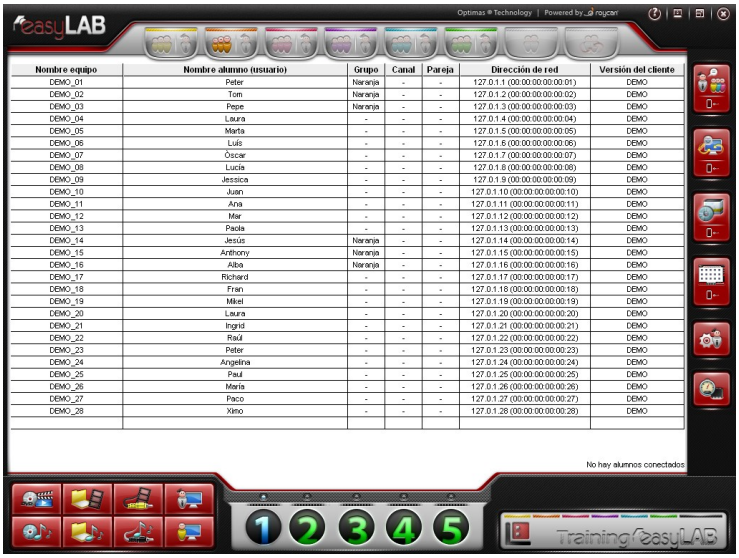
3.2.5.10.- Detailed view

The classroom views are different ways of visualizing the students' sites information in the EasyLAB program screen**.**

Selecting the next button you will choose the Detailed View of the classroom:

The detailed information *view* is very useful for the classroom *administrator*, because among others things, it shows the state of the different networking connections of the students' computers: their IP address and their MAC address.

The screen appearance when we use the detailed view is the next:



Detailed view of the classroom

3.2.5.11.- The mosaic view of screens

This is the most interesting *visualizing way* from the control point of view, it allows supervising the students' work through their computer equipments.

The EasyLAB system allows monitoring up to 32 screens simultaneously, even though in the practice, the normal quantity of screens in your mosaic view will be always lower. This way, the teacher can observe just at once what is happening in the great part of the classroom. At any moment and according to his/her wishes the teacher will be able to magnify and visualize whatever student's screen, with a simple click on.

The mosaic view is closely related to the The student' s screen monitoring. But in the mosaic view you can also visualize all the student's icons simultaneously (as an assembly). You can change its configuration selecting a different view (see the point The teacher's profile and others configurations).

Monitoring all the students simultaneously

If in your classroom there are more students' screens that those that can keep the teacher's screen, you can navigate through the rest of the students' screens by means of the navigating window that appears floating over this mosaic view (in that case we can see the inferior right part, even though you can see it in every place of the screen). Continuing we will see a detail of this navigating screen:

Detail of the screen for navigating among the students of the classroom

The column of buttons place in the left part serves us for increasing or reducing the zoom apply on the student' screen visualization. You can visualize from 6 to up 32 student's screens simultaneously in your screen and obtaining a total vision of the activities that are achieving the students in the classroom, staying in the teacher's site.

When there are more students' screens than the teacher's screen can hold simultaneously, you can navigate through them by means of the mini-view of the classroom that holds this window. Just place the mouse on this mini-view of the classroom, you will see how the icon changes. At this time you can do click and drag for being able to see how it changes the selection of the students.

On the other hand, the buttons from the up part allow us working with the EasyLAB working *Groups*. If you drag one student group over this small screen (as we've seen in To deny applications), the system will visualize only this student group.

To cancel the visualization of a determined Group, just press over the button which indicates the collection of the entire classroom:

> ***Note:*** *Bear in mind that if you work with the Groups in this navigating window, you will not be able to move through the rest of the students. You should cancel the visualization of the Group which is active pressing on the button referred before.*

You can place this window wherever you want, just place it where it doesn't bother you when you want to carry out a visualization of the students' screens.

In addition you can minimize it in case you are not going to use it.

3.2.5.12.- The Normal View

The *Normal view* is the standard view for watching the students' icons, ordered in different ways. The students' icons are represented by means of symbols that will inform us about their present state (communicating with the teacher, microphone switched on, etc.).

This view is the most appropriate for having a general view about the different communicative events that are occurring during the class. Moreover, it helps to find quickly and easily a student, because the icons will appear represented by their respective students' names.

Classroom normal view

3.2.6.- The teacher's profile and others configurations

The EasyLAB system allows creating and setting up different user's profiles, in such way that every teacher will be able to recover the last configuration he/she saved when he/she starts.

To work with the user's profiles and getting validated in EasyLAB, just press with the right button of the mouse on the teacher's icon, you will see a menu like this:

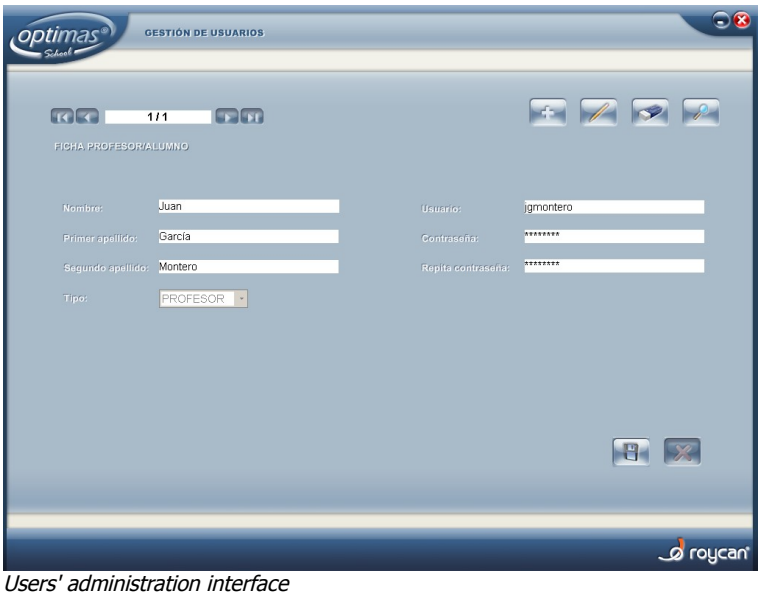
Right button menu over the teacher's icon.

In the previous image press on the icon with the green arrow. It will appear a window asking for the user's name and password.

> ***Warning:*** *Remember that once a user is validated, the session will never be close automatically, even after closing EasyLAB. You have to close the session; doing click with the right button of the teacher's mouse and pressing on the same button you have pressed to validate, but this time symbolized by a red arrow.*

First of all, you should create at least one user for getting validated through the EasyLAB system. For having access to the user's management program, close EasyLAB and press on the low left button. Close EasyLAB and execute the direct access you have gotten in the desktop called the user's management (or in the Start menu).

As soon as you execute this program, you will see a window like the next:



Users' administration interface

For being able to access this window you should introduce the password given to the classroom administrator, same as the user's administrator system password (admin). If you are the classroom administrator and you do not know the password, please contact your distributor.

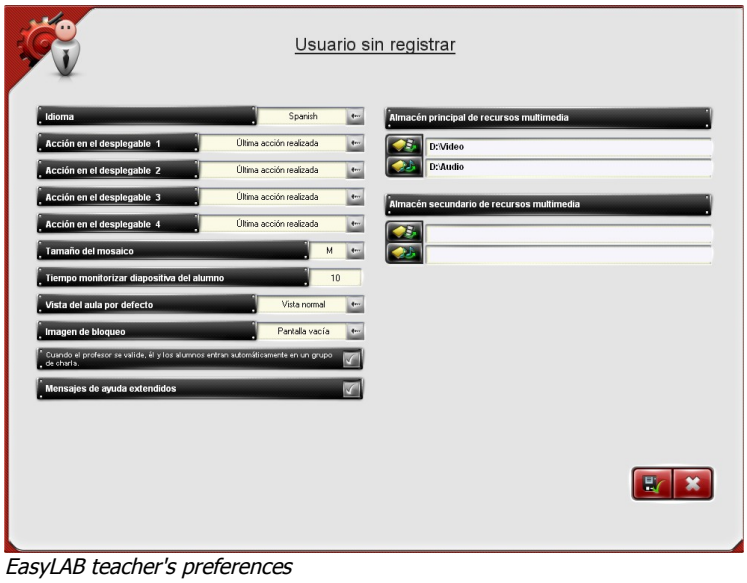
Once you have accessed to the user's management system, press on the "+" symbol for creating a new user; you should fill in the empty spaces with this information: name, surnames, user's name (required for being validated), password, type of user (teacher or student). For saving the data and ending just press on the button to save (which is symbolised by the floppy disk drive).

Others options are; to edit the user you are using it, to delete it, or to achieve searches by different parameters. Take into account that once it was created an user you will not be able to change the kind of user (neither the teacher or the student), including the own user.

As soon as you have creating your account, you can close this window and get validated in the EasyLAB system.

Once it gets validated correctly, you will be able to modify your account profile. Do click on the next button and we will enter in the teacher's profile configuration window.

In this window we can point out different options, for helping every teacher to configure determined parameters according to his/her needs.



EasyLAB teacher's preferences

The teacher's Profile, as we can see in the previous image, includes the next configurations:

- **EasyLAB language interface**.
- **Drop-down actions.** Select then action that you want to see by default in each button when you start EasyLAB with your user.

- **Mosaic size**. We indicate the way are represented the students' icons in the *mosaic view*.
- **Time of monitoring**. The time is passing from one screen to another when the monitoring sequential viewer is working.
- **Classroom view** by default. The teacher will be able to select the classroom view that fits more with his/her necessities and EasyLAB will start with this view.
- **Blocking image**. We can specify an image that will appear in the students' computers when the *general call* or to *block a student's computer* functions *are* applied.
- **Primary warehouse of multimedia resources**. In this place we can indicate in which folders EasyLAB can look for any kind of resource by default. The first one is for the video warehouse and the second for the audio warehouse.
- **Secondary warehouse of multimedia resources.** We can point out more folders for finding the multimedia resources by default.

3.2.7.- Resource Management

By means of this view, besides others functions, you can see at once all the utilized resources in your computer and also organize automatically the students' icons following different criterion of arrangement.

You will see a screen like this:

Resource management screen of EasyLAB

Let's see step by step this new screen. First, we can see the resource meter, shaped like a clock, that show us the CPU use and the time of the system.

Detailed view of the resource meter

We can see the main block buttons of this screen on the next picture:

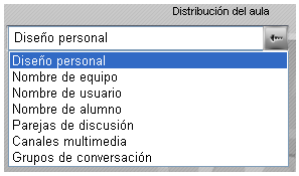
Switch off and Restart buttons

The buttons of the left side Restart and Switch off the computers, meanwhile those place in the right part Close the Windows' and EasyLAB' sessions respectively.

Using the central button, we can send a message to the students involved in the operation to indicate them to save and close all documents that they may have opened because in a moment computers are going to be Switched Off.

Bear in mind to switch on the students' computers, you are not going to see their icons (because the are switched off), they will not be detected by EasyLAB yet. If you press on "to switch on" button the command will be transmitted for all the registered computers.

Finally, in the low part of the screen, you can see a deployed item where you can select the way of organizing automatically the students' icons of your classroom.



Try the different alternatives and choose the best way for arranging the icons in the *working area.*

> ***Note:*** *Bear in mind that you should have saved, at least once, the classroom distribution for having the students already registered, in others words, one teacher, that it is logged in EasyLAB, should have saved at least once his/her configuration in the program for future sessions for being able to switch the computers on automatically.*

3.3.- ADVANCED EXAMPLES

In a great number of activities it is required that one student achieves in front his/her partners, a certain kind of exercise. According to what we have seen in this manual, EasyLAB allows achieving communicative activities in groups, but also by individuals using the control tools.

This way, through the utilization of every tool separately we can get a great number of exercises and at the same time to take advantage of a high efficiency by means of the use of EasyLAB.

We want to emphasize that the majority these tools can be used not only independently, but also they can be mixed among them, this way we can wide considerably the utilities of the program; obtaining very complexing and interesting states of communication.

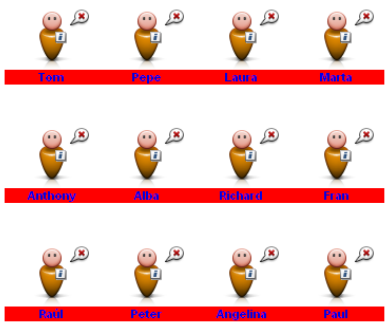
3.3.1.- The interpreter

In this example, that we have called the "The interpreter", we will see how to mix one *working group* with the *private conversation* between the teacher and the student.

The idea is to include the students in a *Group*, but activating the microphone only to one of them for allowing him/her to give a speech to the rest students. At the same time, the teacher will communicate privately with him/her. In other words, only this student will listen the teacher's voice (the teacher will work as the lecturer) and he/she has to do the the simultaneous translation, that it will be heard by the rest of the students.

3.3.1.1.- Step 1

Select with the mouse all the students' icons and drag the selection over the Group button.

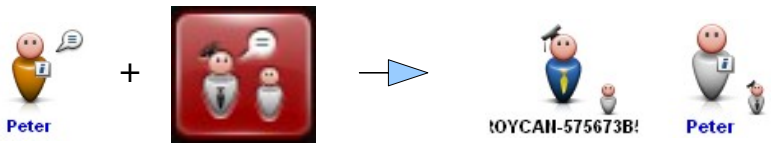


3.3.1.2.- Step 2

By default, all the students' microphones are switched off. Do click on the student speech bubble which acts as the interpreter for activating his/her microphone.

3.3.1.3.- Step 3

Select the student's icon which you have activated its microphone (see how the student's name will a appear in a remarkable red colour). Then do click on the button we've called "to talk to a student" for communicating privately with the student.



In this moment everything is prepared for the exercise and you can talk to the selected student only by means of your microphone. At the same time the rest of the students will hear only what the selected student says.

3.3.2.- Pictionary

This exercise is another version of the previous one with some changes. It is possible that "The interpreter" is too much advanced in certain cases, because of the educational level of the centre. But we can see how, if we reconsider the exercise, using the same or similar tools, the objectives and the result can be completely different.

In this case all the students' group can use the microphone except the chosen student; this student will use the drawing as mean of communication. The teacher will be able of having a private communication with this student giving him/her some clues, help him/her in his/her task.

3.3.2.1.- Step 1

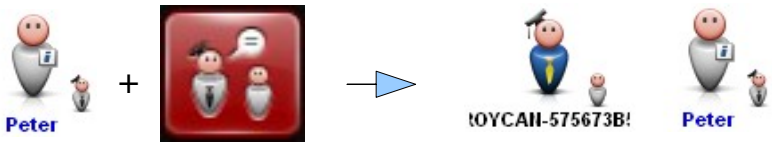
Select with the mouse all the students' icons and drag the selection over the Group button.

3.3.2.2.- Step 2

Do click on the chosen student' s icon (its name has to leave with a remarked red colour). Right after, select one of the buttons which are representing the *broadcasting channels* and do click on the *student's screen* source button.

3.3.2.3.- Step 3

Get a private communication with the chosen student's icon for achieving the exercise. Be sure that the icon was properly selected and do click on the button called "to communicate with a student", in the area of controlling buttons.



3.3.2.4.- Step 4

Select again the assembly of students' icons that will be part of the activity. Press the [Ctrl] key and do click on the chosen student's icon, for excluding it of the previous selection. Drag the selection on the photo gram of the broadcasting channel in which you are emitting the chosen student' screen.

3.3.2.5.- Step 5

Add the teacher in the activity, select its icon and drag it first on the Group button where are included the students (verify that his/she microphone is off) and, then, select the Channel button for being able to see what is drawing the student.

What is happening after achieving all these steps?

All the students are in the same *working group* with their microphone switch off. Therefore, the student will carry out the exercise and communicate directly with the teacher (thanks to the function called *private conversation with a student)* with the purpose of exposing doubts about the way of explaining the example. At the same time, the screen of that student will be visualized by all his/her partners, through the *broadcasting channel*.

At the beginning of the activity, the teacher will indicate the word or concept that the student has to reflect in his/her drawing. The student will be able to execute in his/her computer a drawing program, like Paint, and his/her classmates will be able to see it.

During this exercise the students do not have a free speak opportunity because their microphones remain switch off. The teacher can establish turns for activating the students' microphones and allowing them to resolve the game when he/she considers necessary.

If the teacher wants to give whatever instruction to the whole class, he/she will activate his/her microphone, just doing double click on the "speech bubble" icon. Anyway, it should switch off the button called "*private conversation with a student*", even though he/she can alternate both options; to speak to the whole class of to speak to the chosen student only.

3.4.- Frequently Asked Questions

I have installed EasyLAB and it detects correctly the students' sites. Apparently it works accordingly, but from the teacher's computer (or from any student's computer) I am not able to listen to any sound through the headsets.

You should select as defined sound device the mOP+10 communicative equipment. To do that, Open the Control Panel, do double click in both Audio and Sound devices, it appears a new screen. On this screen select the Audio tab and verify that both the playing as the recording of sound is selected "EasyLAB Sound System".
If you do not hear through any student's computer, repeat the verification.

I have installed the teacher's and students' modules in each computer, but I am not able to see the students' icons in the teacher's interface.

For admitting the EasyLAB functioning in the classroom computers, it is essential that the mOP+10 Communicative Equipments are connected by means of a USB port to every computer (both the teacher's and the students' computers).
In addition, you should assure yourself that the computer networking performing is the correct and that programs as the anti-virus or Firewalls, are not impeding the correct system operation.

I doubt whether the functions are activating or not when we drag the icons or when there is necessary to do click on the buttons.

Our system truly has these two options for using the EasyLAB interface, but both options can be distinguished. When you wish to create *Groups*, *Pairs* or *Channels* select the students' icons and drag them on the appropriate button. The only exception occurs with the buttons of the control area; *monitoring, remote control* and *private conversation with a student.* When you want to use these buttons you should select the student you want to work with first (its icon) and then do click directly on the corresponding button.

Spite of having all my student icons in the same Working Group, it could be possible to send different audio and video sequences to some subgroups of them.

Yes, without any problem. In our EasyLAB system, the use of *Groups* and *broadcasting Channels* are fully independent. You can gather the students' icons and allow the dialogue among the students, and at the same time some of them can be addressee of one audio broadcasting Channel and also another subgroup can be addressee of another broadcasting Channel.

I have one video file for broadcasting it (using a projector) to the student sites but at the same time I want to distribute my student sites in two different groups. Each student group will have a specific rhythm and exercise, in other words they need to watch the video in different moments. It could be possible to send the same video image to both groups in different moments?

There is not problem for EasyLAB. You can use the same file as source for the emission of two different broadcasting Channels. Even if one Channel has begun to broadcast earlier, as the same file is assigned to a second Channel, the playing will start since the beginning, without interfering with the other emission which is being listened by the other group.

In case the EasyLAB interface works correctly, but we can not emit any file (neither video nor audio) through a channel.

If you have any anti-virus software installed into the system, it may happen that this software has detected these files as unknown threats. For resolve the problem you have to deactivate the blockage of unknown treats of your anti virus software.

3.5.- Supported Formats

INPUT		CODECS				EXTENSIONS			
		AUDIO		VIDEO		AUDIO		VIDEO	
Ficheros	✓	MPEG Layer 1/2	✓	MPEG-1/2	✓	M3U	✓	AVI	✓
DVD *1	✓	MP3	✓	DIVX (1/2/3)	✓	MP3	✓	WMV	✓
Audio CD (sin DTS)	✓	AC3 - A/52	✓	MPEG-4	✓	WAV	✓	ASF	✓
Video acquisition	✓*2	DTS	✓	DIVX 5	✓	WMA	✓	DIV	✓
MPEG:		LPCM	✓	XVID	✓	MP1	✓	DIVX	✓
ES	✓	AAC	✓	3IVX D4	✓	MP2	✓	MOV	✓
PS	✓	Vorbis	✓	H.264	✓	OGG	✓		✓
TS	✓	WMA 1/2	✓	Sorenson 1/3 (Quicktime)	✓	OGM	✓	MP2V	✓
PVA	✓	Alaw / µlaw	✓	DV	✓	RA	?	MP4	✓
MP3	✓	MIDI	✗	Cinepak	✓	AAC	✓	MPA	✓
M3U	✓	WMA 3	✓	Theora (alpha 3)	✓	MID	✗	MPE	✓
AVI	✓	ADPCM	✓	H.263/H.263i	✓	AC3	✓	MPEG	✓
ASF / VMW / WMA	✓	DV Audio	✓	MJPEG (A/B)	✓	AMR	✗	MPG	✓
MP4 / MOV / 3GP	✓	FLAC	✓	WMV 1/2	✓	AU	✓	MPV2	✓
OGG / OGM / Annodex	✓	QDM2/QDMC (QuickTime)	✓	WMV 3 / WMV 9 / VC-1	✓	AWB	✗	QT	✓
Matroska (MKV)	✓	MACE	✓	Indeo Video v3 (IV32)	✓	FLAC		QTL	✓
Real	✗	AMR (3GPP)	✗	Indeo Video 4/5 (IV41,IV51)	✗	M4A	✓	RPM	✗
WAV (con DTS)	✓	Real Audio	?	Real Video	✗	MMF	✗	3G2	✗*3
Raw Audio:		Visualization effects	✓			APE	✗	3GP	✗*3
DTS	✓	Speex	✓			MP4	✓	PSPVideo	✗
AAC	✓			SUBTITLES		MPC	✓	FLV	
AC3	✓			DVD	✓			SWF	✗*4
A52	✓			Text Files (MicroDVD, SubRIP, SubViewer, SSA1-5, SAMI, VPlayer)	✗			DV	✗
Raw DV	✓								
FLAC	✓								
FLV (Flash)	✓								
Standard MIDI	✓								
Creative™ Voice	✓								
FTP	✓								

***1**: The copyright laws and patents operate differently depending on which country you are. Please ask for legal advice in your country if you are not sure about any restricted or patent use, as a particular media format.

***2**: Direct Show ***3**: Only video ***4**: Only audio

✔ = Supported ✘ = Not supported

? = Not tested

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